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INTERNISTS AND PHYSICIAN ASSISTANTS: TEAM-BASED PRIMARY CARE

**American Academy of Physician Assistants
American College of Physicians
A Policy Monograph**

2010

INTERNISTS AND PHYSICIAN ASSISTANTS: TEAM-BASED PRIMARY CARE

A Policy Monograph of the
American Academy of Physician Assistants and the
American College of Physicians

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Introduction

The roles of physician–physician assistant (PA) teams have expanded over the past 20 years in response to shortages in the primary care physician supply, changing health care needs of the population, and the outstanding track record of this team-based model of care. Effective interdisciplinary teams play a vital role in improving the quality of and access to health care in the United States, particularly in the delivery of primary care services. In the mid 1960s, an inadequate physician workforce and insufficient access to primary health care services were two factors that led to the development of the PA profession. In 2010, the services of PAs continue to be needed throughout the United States to complement the health care services that physicians provide.

The College first examined the roles of PAs and nurse practitioners (NPs) in primary care in 1993 by appointing a Task Force on Physician Supply that later drafted a position paper that was published in the *Annals of Internal Medicine* in 1994¹. A subsequent paper published in 2000 sought to address concerns about the increasing number and expanding scope of practice of PAs and NPs.² In 2008, the College published a policy monograph on the role of NPs in primary care. It addressed the doctor of nursing degree and the role of NPs in the patient-centered medical home.³ The College recognized the unique complementary care that PAs provide in primary care practices as part of a physician-directed team and felt strongly that a paper focusing solely on PAs in primary care was also warranted. Much like the relationship that PAs and primary care physicians enjoy in health care delivery, this paper is a joint effort of the American Academy of Physician Assistants (AAPA) and the American College of Physicians (ACP).

AAPA and ACP recognize that PAs and physicians share common goals of providing high-quality, patient-centered care and improving the health status of their patients. In addition, physicians and PAs share concerns regarding the decline in the primary care workforce, the need for team-oriented practice and models of care such as the patient-centered medical home, and the importance of interprofessional educational opportunities to improve the training of both physicians and PAs. Acknowledging the critical role PAs and physicians play in improving access to care and the unique relationship that the professions share, AAPA and ACP offer the following position statements on physicians, PAs, primary care, and the patient-centered medical home.

- 1. AAPA and ACP believe that physicians and PAs working together in a team-oriented practice, such as the patient-centered medical home, is a proven model for delivering high-quality, cost-effective patient care. National and state legal, regulatory, and reimbursement policies should recognize that PAs function as primary care providers in the patient-centered medical home as part of a multi-disciplinary clinical team led by a physician.**
- 2. AAPA and ACP encourage training programs from both professions to promote and support opportunities for internists to precept PA students and participate as faculty at PA programs.**
- 3. AAPA and ACP encourage interdisciplinary education of physicians-in-training and PA students throughout their educational programs.**

4. **AAPA and ACP should continue to be represented on the accrediting and certification bodies of the PA profession (ARC-PA and NCCPA).**
5. **AAPA and ACP encourage the creation of an interdisciplinary task force on workforce development. Workforce policies should ensure adequate supplies of primary care physicians and PAs to improve access to quality care and to avert anticipated shortages of primary care clinicians for adults. Workforce policies should recognize that training more PAs does not eliminate the need nor substitute for increasing the numbers of general internists and family physicians trained to provide primary care.**
6. **AAPA and ACP encourage flexibility in federal and state regulation so that each medical practice determines appropriate clinical roles within the medical team, physician-to-PA ratios, and supervision processes, enabling each clinician to work to the fullest extent of his or her license and expertise.**

Background

A physician assistant (PA) is a graduate of an accredited PA education program who is authorized by the state to practice medicine with the supervision of a licensed physician. PAs are trained to provide diagnostic, therapeutic, and preventive care as delegated by a physician. PAs work in nearly all areas of medicine and surgery but the majority work in family/general medicine (24.8%), general surgery and surgical subspecialties (25.1%), and general internal medicine and internal medicine subspecialties (17.2%).⁴ The AAPA estimates that in 2008, approximately 257 million patient visits were made to PAs and approximately 332 million medications were recommended or prescribed by PAs.

PA Workforce

The PA workforce has risen from about 250 in 1970 to nearly 75,000 today. An estimated 38% work in hospitals, 35% are in group practices, and 9% are in solo physician practices. The remainder work in other settings, such as community health centers, free-standing surgical centers, and rural clinics.

PA workforce trends mirror that of the physician workforce in the United States. Since PAs are largely employed by physicians, they follow the specialties where they are most likely to find employment. The majority of PAs practiced in primary care disciplines until the mid-1990s, but since then the percentage of PAs in primary care has steadily declined*¹, paralleling the trend of physicians to specialize or subspecialize. In 1996, 50.8% of PAs worked in family medicine, general internal medicine, and general pediatrics. By 2009, the percent had fallen to 35.7%.⁵ Similarly, the number of third-year internal medicine residents who intended to pursue general internal medicine fell from 54% in 1998 to only 23% in 2007.⁶

Similar to estimates that there will be a primary care physician shortage, it is estimated that the supply of PAs will also not be able to meet future demand.⁷

* While the percentage of PAs in primary care has declined, actual numbers have increased. There were 29,400 PAs in clinical practice in 1996, with 15,000 in primary care. There were nearly 75,000 PAs in clinical practice in 2009, with 27,000 in primary care.

Education

Applicants to PA programs must complete a minimum of 2 years of college courses in both basic and behavioral science prior to PA training. Most PA students enter training with a bachelor's degree and an average of 3 years of health care experience.⁸ There are nearly 150 accredited PA training programs throughout the United States, primarily located at medical schools and teaching hospitals. New York has the greatest number of PA programs (19), followed by Pennsylvania (16), California (10), and Texas (8).⁹ The typical program lasts 27 months¹⁰ and is modeled on physician education. In fact, PA students commonly share classes, facilities and clinical rotations with medical students. While programs are granted flexibility in the types of degrees they award, ranging from a certificate to a master's degree, the majority (88%) of PA programs offer a master's degree. No matter what type of degree is awarded, all PA students must complete an accredited formal education program and pass a national exam to obtain a license.

PA programs are accredited by the independent Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), sponsored by the American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American Academy of Physician Assistants (AAPA), American College of Physicians (ACP), American College of Surgeons (ACS), American Medical Association (AMA), and the Physician Assistant Education Association (PAEA). These organizations collaboratively monitor and assess program compliance. ARC-PA is the sole accrediting agency responsible for accrediting PA programs in the United States. Accreditation standards require competency-based curricula.

The first year of PA education typically consists of a didactic curriculum consisting of coursework in basic medical, behavioral, and social sciences, including anatomy, physiology, pharmacology, physical diagnosis, biochemistry, pathophysiology, microbiology, and medical ethics. PA students complete approximately 400 hours in basic sciences, 175 hours in behavioral sciences, and 580 hours of clinical medicine. The second year of PA training involves clinical training with rotations in outpatient, emergency, inpatient, and long-term care clinical settings. Rotations include family medicine, internal medicine, obstetrics and gynecology, pediatrics, general surgery, emergency medicine, and psychiatry. Prior to graduation, the average PA student completes 2000 hours of supervised clinical practice.¹¹

In addition to the 148 accredited PA programs, there are approximately 41 postgraduate training programs in the United States. The typical program lasts 12 months and offers a certificate of specialty training. The program is based on didactic and clinical curriculum similar to that of physician residency programs.¹²

Certification and Licensure

To practice as a PA, a PA program graduate must pass the Physician Assistant National Certifying Exam, administered by the National Commission on Certification of Physician Assistants (NCCPA), and obtain an individual license from a state medical or PA licensing board. All 50 states, the District of Columbia, and the majority of US territories have enacted laws regulating PA practice. In order for an individual to practice as a PA, he/she must meet the state's licensing criteria and have a supervising physician. All licensing authorities allow physicians to delegate prescriptive authority to the PAs they supervise. To maintain certification, PAs must complete 100 Continuing Medical Education credits every 2 years, and pass a recertification exam every 6 years.

Scope of Practice

Each PA's scope of practice is defined by the individual's education and experience, state law, facility policy and physician delegation. PAs are unique in that they embrace a physician-delegated scope of practice and view the care they provide as complementary to the care provided by physicians. In a physician practice, the PA's scope of practice is mainly determined by the delegatory decisions made by the supervising physician. The physician has the ability to observe the PA's competency and performance and plan for PA utilization based on the PA's abilities, the physician's delegatory style, and the needs of the patients seen in the practice. The physician has ultimate responsibility for the patient and the supervision of the PA.

State laws allow off-site supervision by physicians as long as they are available to the PA via telecommunication. A PA may have multiple supervising physicians, and a physician may supervise more than one PA. Supervising physicians do not need to be on the premises as long as they are available by phone or electronically and within a reasonable distance. In certain rural or inner-city clinics, PAs are the principal care providers, with the supervising physician present only 1 or 2 days each week. In some cases, particularly in very rural or remote areas, the supervising physician is rarely if ever physically present in the PA-run clinic because of the distances between facilities.

In licensed health care facilities, including hospitals, nursing homes, and surgical centers, the facilities have a role in determining the scope of practice of PAs who practice in their institutions. PAs are generally credentialed by the medical staff and authorized through privileges in a manner parallel to that used for physicians.¹³ These privileges must conform to state law.

Federally Employed PAs

Nine percent of PAs – approximately 7,000 – are employed by the federal government. Most federally employed PAs are not licensed but are credentialed by the federal agency that employs them. The criteria for practice are the same as state licensure requirements – graduation from an accredited PA program and passage of the Physician Assistant National Certifying Examination given by the NCCPA, and practice with a physician. Similarly, the PA scope of practice and supervision requirements are established by the employing agency. The Department of Veterans Affairs and the United States Uniformed Services are the main federal employers of PAs.

Reimbursement

Reimbursement from third-party payers is typically paid to the PA's employer. Medicare reimburses for physician services performed by PAs at 85% of the Physician Fee Schedule. If billed under Medicare's "incident to" or shared visit rules, services delivered by PAs are reimbursed at the full physician rate. For Medicaid, all 50 states and the District of Columbia cover medical services provided by PAs under their Medicaid fee-for-service or Medicaid managed care programs at either the same or a slightly lower rate than that paid to physicians. Nearly all private payers cover services provided by PAs at a rate that ranges between 85% and 100% of the physician rate.

PA Roles in Primary Care

Nearly 40% of PAs practice in primary care specialties, 60% of which are employed by physicians in solo or group practices. The remainder of work is in such settings as community health centers, hospitals, HMOs, correctional systems, home health agencies, and long-term care facilities. In the primary care setting, a supervising physician may delegate a PA to perform physical examinations, diagnose and treat illnesses, order and interpret lab tests, prescribe medications, manage patients with chronic conditions, perform minor surgical procedures, provide patient education, make hospital or nursing home rounds, and take call.¹⁴

As primary care physicians need to become more efficient in an increasingly difficult reimbursement environment, PAs are proving to be particularly useful. PAs can help with routine office visits, rounds, and call, allowing the physician to manage more complex cases. When PAs assist with patients with lower acuity, the practice is able to see more patients faster, reducing wait times and increasing patient satisfaction.¹⁵ A 1994 AMA Socioeconomic Monitoring System survey found that solo practice physicians experienced expanded practice, greater efficiency, and greater access to care for their patients when they employed a nonphysician clinician, including PAs, NPs, clinical nurse specialists, and certified nurse-midwives. Physicians who employed nonphysician clinicians were on average able to work one less week per year on average while simultaneously supplying more hours in office visits and patient care and increasing net income by nearly 18%. Of the four non-physician clinician groups in the study, PAs rated highest in terms of patient productivity and patient acceptance.¹⁶ A study of a dozen specialty practices across the United States found that the practices reported being financially stable in large part because of the integration of PAs and NPs. The study also found that in many practices, the increased patient volume was divided. Routine, follow-up patients were seen by the PAs and NPs, and the physician saw the more acute, complex cases that tended to be reimbursed at higher rates.¹⁷ Another study, a 2006 look at a gastroenterology practice, found that billing charges for the NPs and PAs were 2.5 to 4 times their salaries.¹⁸

PA Roles in the Patient-Centered Medical Home

The patient-centered medical home is an emerging physician-guided model of practice based upon providing patients with comprehensive primary care in a team-based environment. Within the PCMH, a physician leads a team that collectively takes responsibility for the ongoing care of patients. Ideally, each member of a clinical team should practice to the highest level of their license, knowledge, skills and abilities.

Since PA training is rooted in providing physician-guided, team-based care, PAs are particularly suited to play a central role in the patient-centered medical home. As key members of the team, PAs can help to ensure continuity, comprehensiveness, and coordination of care, working with physicians and other health care professionals. The roles a particular PA could play within the patient-centered medical home will depend on the clinical setting, patient population, clinical competency and experience, and the professional relationship between the PA and the physician(s).

The roles a particular PA could play within the patient-centered medical home will depend on the clinical setting, patient population, clinical competency and experience, and the professional relationship between the PA and

the physician(s). For example, some PAs maintain their own panel of patients alongside a physician, in others they might focus on acute care and/or follow-up care of chronic conditions and share a panel of patients with a physician. PAs sometimes practice alone, for example, in a rural practice, with a supervising physician located elsewhere.

Challenges for PAs and Internists

Among the challenges that PAs and general internists face is the struggle to find the appropriate balance of autonomy and supervision for the PA in the practice. A physician may be hesitant to hire a PA because he or she may feel that the responsibility of supervising and delegating to a PA is too burdensome. For some physicians, the role of a PA compared with an NP in a practice may be unclear.

General internists may find marketplace demand for PAs a challenge, as PAs are attracted to the higher salaries offered by medical and surgical specialty practice. Use of PAs in hospital settings has also increased in response to restrictions in resident duty hours, as more hospitals integrate PAs into their services to perform tasks previously completed by physician residents.¹⁹

Sometimes general internists who refer a patient to a specialty practice are surprised to find that the consult has been performed by a PA. If the general internist is concerned about the level of the specialist physician's involvement, it is crucial that the two physicians discuss the way referrals are handled and how much physician involvement should occur.

Because physicians and PAs are a team, issues that affect one profession often have a direct affect on the other, such as decreasing reimbursement and increasingly burdensome paperwork and regulations.

Position Statements of the AAPA and ACP

- 1. AAPA and ACP believe that physicians and PAs working together in a team-oriented practice, such as the patient-centered medical home, is a proven model for delivering high quality, cost-effective patient care. National and state legal, regulatory and reimbursement policies should recognize that PAs function as primary care providers in the patient-centered medical home as part of a multi-disciplinary clinical team led by a physician.**

AAPA and ACP support practice models, such as the patient-centered medical home, where there is joint communication and decision-making to meet the health care needs of patients. Such models require a shared commitment to achieving positive patient outcomes, a mutual understanding of each team member's roles, and excellent communication.²⁰ In every practice model, all professionals should ensure that patients are informed of the title and credentials of every person who treats them. This essential part of patient care in any practice takes on even more significance in integrated practices, such as the patient-centered medical home, where team care is the norm.

According to the Institute of Medicine (IOM), enhanced infrastructures are needed to ensure effective and timely communication among clinicians and between patients and clinicians in order to improve the quality of patient care.²¹ Since state laws allow many PAs to practice without the supervision of an on-site physician, health information technology is vital to improving both the quality and coordination of health care services. Through computer networks

and the use of information technology, medical linkages, and long-distance learning and consultation, opportunities can be established that will enable physicians and PAs to communicate readily concerning patient diagnosis and treatment. Ideally, such technology should ensure the availability of clinical information at the point of care for all providers and patients. AAPA and ACP support the use of electronic health records (EHRs) as one critical element of the infrastructure needed to facilitate communication among members of an effective health care team. The availability of such communication systems will enhance opportunities for primary care services to be delivered by integrated teams of providers.

In addition, many physicians and PAs are uncertain about particular aspects of team-based care. AAPA and ACP recognize that these knowledge gaps are opportunities to develop educational resources for our respective members about professional roles, including delegation and supervision and use of information technology to enhance communication. Innovative models of health care delivery, such as the patient-centered medical home, could serve as examples for such educational efforts. AAPA and ACP also advocate for research to develop effective systems of teamwork and co-management of patients among physicians and PAs as clinically indicated.

2. AAPA and ACP encourage training programs from both professions to promote and support opportunities for internists to precept PA students and participate as faculty at PA programs.

Physicians often serve as preceptors for students in PA training programs. As preceptors, they are able to become involved in the teaching process and evaluate the skills and abilities of PAs. This function is beneficial to both the preceptor and the PA, as many preceptors go on to hire PAs for their practice. Additionally, with a predominantly master-degree curriculum, PA training programs are struggling to find an adequate number of PA educators with doctoral degrees. A 2005 faculty pipeline study estimated that there would be only one doctorate-prepared PA faculty available per U.S. program by 2010.²² Internists are particularly well-equipped to serve as faculty and preceptors at PA programs and such opportunities should be promoted.

3. AAPA and ACP encourage interdisciplinary education of physicians-in-training and PA students throughout their educational programs.

To foster interdisciplinary practice, the AAPA and ACP encourage innovative education programs emphasizing the team approach in medical schools, residency programs, and PA education programs. Physicians-in-training and physician assistants-in-training must be adequately prepared to work as part of a health care team in order to provide optimal patient-centered care. Training together will help students and residents better understand the overlapping and complementary skills of the various fields and the importance of interdisciplinary teams. Communication across disciplines is also extremely important and is best learned during training.

National health care workforce policies should ensure health care providers are adequately trained to work within multidisciplinary teams. Efforts should focus on providing multidisciplinary training to both future and practicing clinicians. AAPA and ACP support policies and funding to explore the effectiveness of multidisciplinary training, which could include incorporating joint coursework and clinical experience opportunities into educational curricula for

medical and PA students, employing faculty from both PA schools and schools of medicine to teach PA and medical students, and offering joint continuing education programs for physicians and PAs through both in-person and off-site learning.

4. AAPA and ACP should continue to be represented on the accrediting and certification bodies of the PA profession (ARC-PA and NCCPA).

AAPA and ACP remain committed to their participation on the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), the independent body authorized to accredit qualified PA educational programs leading to the professional credential, Physician Assistant. Both organizations cooperate with the ARC-PA as collaborating organizations to establish, maintain, and promote appropriate standards of quality for entry-level education of PAs and to provide recognition for educational programs that meet the minimum requirements outlined in these standards.

AAPA and ACP also share a commitment to continue their participation on the National Commission on Certification of Physician Assistants (NCCPA), the only nationally recognized certifying body for PAs in the United States. Certification by NCCPA indicates satisfactory completion of an accredited PA educational program and passage of the national certification examination. The exam is administered by NCCPA to establish a level of competence for entry into the PA profession.

5. AAPA and ACP encourage the creation of an interdisciplinary task force on workforce development. Workforce policies should ensure adequate supplies of primary care physicians and PAs to improve access to quality care and to avert anticipated shortages of primary care clinicians for adults. Workforce policies should recognize that training more PAs does not eliminate the need nor substitute for increasing the numbers of general internists and family physicians trained to provide primary care.

The PA and internal medicine communities are confronted with similar workforce issues of predicted clinician shortage and increased proportion of clinicians practicing in subspecialties. A 2008 study predicted a shortage of 35,000–44,000 adult primary care physicians by 2025. Data suggest that greater use of NPs and PAs is not expected to make enough of an impact on this shortfall.²³ A study by the Association of American Medical Colleges (AAMC) found that even with a projected growth of 2% per year between 2006 and 2025 (an increase of 46%), an additional 150,000 NPs and PAs beyond this level would be required to reduce demand for primary care physicians by 25%.²⁴ Annual numbers of NP graduates fell from 8,200 in 1998 to 6,000 in 2005 and are projected to fall to 4,000 by 2015. In addition, only about 65% of NPs currently work in primary care.²⁵ The number of PA graduates has steadily increased over the years, as average class size and the number of programs has increased. There were 5,500 new graduates in 2009, up from 4,000 in 1999.²⁶

AAPA and ACP are concerned about the level of medical student and PA student interest in careers in primary care. In a study of fourth-year medical students at 11 U.S. medical schools in the spring of 2007, only 2% reported that they were likely to enter careers in general internal medicine.²⁷ Despite the recent uptick in interest seen among new PA graduates, the PA community is

challenged by many of the same issues that face general internal medicine—many students show initial interest in primary care but decide, like medical students, to go into other specialties and subspecialties. Further, as the number of general internal medicine practices dwindles, the opportunities for PAs to work in general internal medicine also are shrinking. Both organizations are committed to reversing this decline and encourage the creation of an interdisciplinary task force on workforce development to examine the nation's health care workforce needs and ensure that there are adequate numbers and types of health professionals to meet the needs of the population. Any workforce policies should recognize the continued and essential need for patients to have access to a personal physician who accepts responsibility for their entire health, working in collaboration with nonphysician clinicians involved in caring for the patient. Consequently, training more PAs does not eliminate the need nor substitute for increasing the number of general internists or family physicians trained to provide primary care.²⁸

6. AAPA and ACP encourage flexibility in federal and state regulation so that each medical practice determines appropriate clinical roles within the medical team, physician-to-PA ratios, and supervision processes, enabling each clinician to work to the fullest extent of his or her license and expertise.

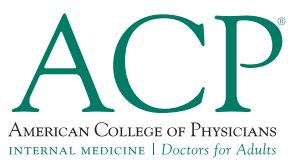
Physicians and PAs enjoy a unique relationship where it has been established that PAs will provide complementary care with the supervision and delegation of a physician. It is important to understand the distinctive roles of all team members and use each team member at the highest level of their license, knowledge, skills, and abilities to ensure high performance in a multidisciplinary team. Flexibility in federal and state regulations enables physicians to delegate appropriate duties to PAs based on their own assessment of each PA's knowledge skills and abilities within their scope of practice. Physician-to-PA ratios and the supervision process should not be standardized. Instead, they should be determined by the needs of the practice and the community.

Conclusion

The future of health care delivery will require multidisciplinary teams of health care professionals working together to provide patient-centered care. Physicians and PAs share a commitment to providing high-quality care, and the complementary care that PAs provide will become increasingly critical to a high-performance health care system. PAs play an essential role in provision of primary care. Many physicians rely upon PAs in their practices to provide direct patient care services within their areas of training, competence, and scope of practice. AAPA and ACP are committed to building on the common ground between PAs and internists in order to ensure an adequate, well-trained primary care physician and PA workforce to meet the complex health care needs of the population.

References

1. **American College of Physicians.** Physician Assistants and Nurse Practitioners. *Annals of Internal Medicine* 1994;121(9):714-716.
2. **American College of Physicians.** Expanding Roles of Nurse Practitioners and Physician Assistants. 2000.
3. **American College of Physicians.** Nurse Practitioners in Primary Care. 2008.
4. **American Academy of Physician Assistants.** 2009 AAPA Physician Assistant Census National Report. January 2010.
5. **American Academy of Physician Assistants.** 2009 AAPA Physician Assistant Census National Report. January 2010.
6. **Weisman, Arlene.** Office of Research, Planning, and Evaluation, American College of Physicians. Personal communication. May 2009. ITE Exam Survey Data.
7. **Colwill JM, Cultice JM, Kruse RL.** Will generalist physician supply meet demands of an increasing and aging population? *Health Aff (Millwood)*. 2008 May-Jun;27(3):w232-41. Epub 2008 Apr 29.
8. **Physician Assistant Education Association.** Twenty-third Annual Report on Physician Assistant Educational Programs in the United States, 2006-2007
9. **25th Annual Report on Physician Assistant Educational Programs (Preliminary Data, 2008-2009).** Physician Assistant Education Association. November 2009.
10. **25th Annual Report on Physician Assistant Educational Programs (Preliminary Data, 2008-2009).** Physician Assistant Education Association. November 2009.
11. **Association of Physician Assistant Programs.** Eleventh Annual Report on Physician Assistant Educational Programs in the United States, 1994-95.
12. **Association of Postgraduate Physician Assistant Programs.** APPAP programs by specialty. Accessed at <http://appap.org/Programs/tabid/58/Default.aspx> on January 30, 2010.
13. **American Academy of Physician Assistants.** Issue Brief. PA Scope of Practice. May 2009.
14. **American Academy of Physician Assistants.** Physician Assistants in Primary Care. 2009.
15. **Roblin RW, Howard DH, Becker ER, Adams EK, Roberts MH.** Use of Midlevel Practitioners to Achieve Labor Cost Savings in the Primary Care Practice of an MCO. *Health Serv Res.* 2004 June; 39(3): 607-626.
16. **Gonzalez, ML, ed.** Socioeconomic Characteristics of Medical Practice 1995. Center for Health Policy Research, American Medical Association. Chicago, IL.
17. **Dower C, Christian S.** Physician Assistants and Nurse Practitioners in Specialty Care: Six Practices Make It Work. Center for the Health Professions, University of California, San Francisco, June 2009.
18. **Wagonfeld J.** The Nonphysician Provider in the Gastroenterology Practice. *Gastrointestinal Endoscopy Clinics of North America*, Volume 16, Issue 4, Pages 719-725, 2006.
19. **Cawley JF, Hooker RS** The effect of resident work hour restrictions on physician assistant hospital utilization. *J Phys Assist Educ.* 2006;17:41-43.
20. **Crossing the Quality Chasm: A New Health System for the 21st Century.** Academy of Sciences, Institute of Medicine. Washington, DC, 2001
21. **Crossing the Quality Chasm: A New Health System for the 21st Century.** Academy of Sciences, Institute of Medicine. Washington, DC, 2001.
22. **Orcutt VL, Hildebrand A, Jones PE.** The doctoral pipeline in physician assistant education. *J Phys Assist Educ.* 2006;17:6-9.
23. **Colwill JM, Cultice JM, Kruse RL.** Will generalist physician supply meet demands of an increasing and aging population? *Health Aff (Millwood)*. 2008 May-Jun;27(3):w232-41. Epub 2008 Apr 29.
24. **Dill MJ and Salsberg ES.** Association of American Medical Colleges. The Complexities of Physician Supply and Demand: Projections Through 2025. Nov. 2008. Accessed on January 30, 2010 at https://services.aamc.org/Publications/showfile.cfm?file=version122.pdf&prd_id=244&prv_id=299&pdf_id=122
25. **Bodenheimer T, Chen E, Bennett HD.** Confronting the growing burden of chronic disease: can the U.S. health care workforce do the job? *Health Aff (Millwood)*. 2009 Jan-Feb;28(1):64-74.
26. **25th Annual Report on Physician Assistant Educational Programs (Preliminary Data, 2008-2009).** Physician Assistant Education Association. November 2009.
27. **Hauer KE et al.** Factors Associated With Medical Students' Career Choices Regarding Internal Medicine. *JAMA.* 2008;300(10):1154-1164.
28. **American College of Physicians.** Nurse Practitioners in Primary Care. Policy Monograph. 2009.



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